PICTURE FRAME ASSEMBLY

Background of the Invention

The present invention relates generally to picture frames, and more specifically to a picture frame for recording and playing sounds, as well as displaying a picture.

Many people enjoy displaying pictures of friends, family members, pets, scenic landscapes, or special occasions within a conventional picture frame assembly. The picture frame assembly protects the picture, provides a means for mounting and displaying the picture, and enhances the appearance of the picture. Some picture frame assemblies include an audio recorder and player device for recording and playing sounds associated with the picture. For example, the voice of a subject of a photograph displayed in a picture frame assembly may be recorded and selectively played using the device mounted in the assembly. However, picture frame assemblies having an audio recorder and player device are more costly than conventional picture frame assemblies. Thus, maintaining an inventory of picture frame assemblies having an audio recorder and player device is significantly more expensive than maintaining an inventory of conventional picture frame assemblies that do not include this added feature. In the past, the audio recorder and player devices were mounted in the frame thus requiring a manufacturer or seller to stock an audio recorder and player device for each frame in each style of frame stocked in the inventory.

Summary of the Invention

In one aspect, the present invention includes a picture frame assembly for displaying a picture having a forward side and a reverse side opposite the forward side. The picture frame assembly includes a universal support having a front face for facing the reverse side of the picture, a back face opposite the front face, and an outer peripheral edge surrounding the front face and the back face. The picture frame assembly also includes an audio recorder and player device mounted on the support for recording and playing sounds. The device includes a storage component for storing the sounds, a speaker for playing the stored sounds, and at least one switch for activating the device to record the sounds and play the recorded sounds. Additionally, the picture frame assembly

includes a frame selected from a group of frames having differing characteristics. Each of the frames in the group of frames has a forward surface, a rearward surface opposite the forward surface, a mount adapted for connecting the frame to the universal support, and an opening sized and shaped for viewing the picture through the frame when the frame is connected to the support. Each of the frames in the group of frames is sized and shaped to allow clear access to the switch for activating the device to record the sounds and to play the recorded sounds when the frame is connected to the universal support.

Other features of the present invention will be in part apparent and in part pointed out hereinafter.

Brief Description of the Drawings

Fig. 1 is a front perspective of a picture frame assembly of the present invention;

Fig. 2 is rear perspective of the picture frame assembly;

Fig. 3 is a front elevation of a universal support of the picture frame assembly of the present invention;

Fig. 4 is a rear elevation of the universal support;

Fig. 5 is a schematic of an audio recorder and player device of the picture frame assembly of the present invention;

Fig. 6 is a separated perspective of the picture frame assembly of the present invention;

Fig. 7 is a front elevation of a first frame selected from a group of frames of the picture frame assembly of the present invention;

Fig. 8 is a rear elevation of the frame shown in Fig. 7;

Fig. 9 is a front elevation of a second frame selected from the group of frames of the picture frame assembly of the present invention;

Fig. 10 is a rear elevation of the frame shown in Fig. 9;

Fig. 11 is a front elevation of a third frame selected from the group of frames of the picture frame assembly of the present invention; and

Fig. 12 is a rear elevation of the frame shown in Fig. 11.

Corresponding reference characters indicate corresponding parts throughout the several views of the drawings.

Detailed Description of the Preferred Embodiment

Referring now to the drawings and in particular to Fig. 1, a picture frame assembly of one embodiment of the present invention is designated in its entirety by the reference numeral 10. The assembly is used in a conventional manner for displaying a picture 12 (e.g., a photograph or a drawing) having a forward side 14 including an image for viewing and a reverse side (not shown) opposite the forward side. As illustrated in Fig. 2, the picture frame assembly 10 generally comprises a universal support (generally designated by 20), an audio recorder and player device (generally designated by 22) mounted on the universal support for recording and playing back sounds, and a frame 24.

The frame 24 has a forward surface 30 as shown in Fig. 1, and a rearward surface 32 as shown in Fig. 2. As illustrated in Fig. 1, the frame 24 has an opening 34 sized and shaped for viewing the picture 12 through the frame when the frame is connected to the support 20. As illustrated in Fig. 2, the frame 24 also includes a mount, generally designated by the reference numeral 40, adapted for connecting the frame to the universal support 20. In one embodiment, the mount 40 consists of plurality of tabs 42, each of which is rotatably coupled to the rearward surface 32 of the frame 24 with a screw 44 for rotation with respect to the frame to selectively connect the frame to and disconnect the frame from the universal support 20. However, other mounts 40 (e.g. threaded fasteners or snap fasteners) for releasably connecting the frame 24 to the universal support 20 may be used without departing from the scope of the present invention. Further, in one embodiment the rearward surface 32 of the frame 24 includes a recess 46 (Fig. 8) sized and shaped for receiving the universal support 20 when the frame is connected to the universal support. Although the recess 46 may have other configurations without departing from the scope of the present invention, in one embodiment the recess is formed by a rabbet at an inner edge of the rearward surface 32 of the frame surrounding the opening 34. As is also evident from Fig. 2, the frame 24 is sized and shaped to allow clear access to the audio recorder and player device 22, and in particular to allow clear access to the controls of the device for operating the device as will be explained in more detail below. The frame 24 is selected from a group of frames (e.g., the frames illustrated in Figs. 7-

12) each having differing characteristics such as color, texture, shape, and/or design. Each frame 24 in the group of frames is interchangeable so each frame is configured to connect to the universal support 20. In one embodiment, the interchangeability of the frames 24 is ensured by having similar recesses 46 and mounts 40 provided on each of the frames in the group. The picture frame assembly 10 may be sized and shaped appropriately to accommodate pictures of varying sizes, such as for example 5 X 7 inches, 2 X 3 inches, and 7 X 9 inches. It is envisioned that each frame 24 in a group of frames of a given size and shape (e.g., 5 X 7 rectangular frames) will be interchangeable with the other frames in that group. However, the frames 24 may not be interchangeable with frames in groups having other sizes and shapes.

The universal support 20 includes a front face 50 as shown in Fig. 3 for facing the reverse side of the picture 12 and a back face 52 as shown in Fig. 4 opposite the front face. As further illustrated in Fig. 4, the support 20 includes an outer peripheral edge 54 surrounding the front face 50 and the back face 52. In one embodiment, the universal support 20 includes a stand 56 for supporting the picture 12 in a generally upright position as shown. Other types of supports (e.g., a hanger for mounting the picture frame on a wall) are also envisioned as being with the scope of the present invention. The stand 56 is connected to the back face 52 of the support 20 by a hinge 58 for pivotal movement between a deployed position in which the stand extends outward from the back face 52 of the support for supporting the picture 12 in a generally upright position, and a retracted position in which the stand is positioned flat against the back face of the support for storage. Although the stand 56 is described and illustrated herein as extending from the universal support 20, in an alternative embodiment it is envisioned that the stand may extend from the frame 24. As will be appreciated by those skilled in the art, the stand 56 described above is adapted to support the picture 12 in two distinct upright orientations: a portrait orientation and a landscape orientation.

The audio recorder and player device 22 is mounted on the support 20 inside a housing formed in the back face 52 thereof. As illustrated in Fig. 5, the audio recorder and player device 22 includes a microphone 60 for recording sounds (e.g., an audio message associated with the picture 12), a storage component 62 for storing the sounds, a speaker 64 for playing the sounds, a

record switch 66 for activating the microphone and storage component to record the sounds, and a playback switch 68 for activating the speaker and the storage component to play the sounds. The device 22 may also include other components such as indicator lights (e.g., an LED) for signaling operation of the device in a particular mode (e.g., recording). The particular configuration of the audio recorder and player device 22 may be of any conventional design and may be, for example, of solid-state construction having a digital storage component. The device 22 may also have a hard disk or tape drive configuration without departing from the scope of this invention. Further, the device 22 may be digital or analog without departing from the scope of the present invention.

In one embodiment, the audio recorder and player device 22 records, stores, and plays sounds having a duration of about ten seconds. Although other power sources may be used (e.g., connection to a standard electrical outlet) without departing from the scope of the present invention, in one embodiment a battery 70 is operatively connected to the audio recorder and player device 22 to power the device and its individual components. Because the features of the audio recorder and player device 22 are conventional, the device will not be described in further detail.

As will be appreciated by those skilled in the art, the assembly 10 may also include a picture mat 80, a transparent cover 82, and a frame 24, as shown in Fig. 6. In an alternative embodiment, the picture mat 80 may be omitted from the picture frame assembly 10. In an exemplary embodiment, the picture 12 is sandwiched between the picture mat 80 and the transparent cover 82, and the mat, the picture, and the cover are sandwiched between the frame 24 and the universal support 20.

The recess 46 in the rearward surface 32 of each frame 20 is illustrated in Figs. 8, 10, and 12. As illustrated in Fig. 6, the recess 46 is sized and shaped for receiving the transparent cover 82, the picture 12, the picture mat 80, and the universal support 20 therein when the frame is connected to the support. To connect a frame 24 to the universal support 20, the tabs 42 are rotated to a position in which they do not obstruct the recess 46 as shown in Figs. 8, 10, and 12, and the transparent cover 82, the picture 12, the picture mat 80, and the support are positioned within the recess. The tabs 42 are then rotated so each tab

overlaps the peripheral edge 54 of the universal support 20 to securely connect the frame 24 to the support as shown in Fig. 2. To disconnect the frame 24 from the universal support 20, the tabs 42 are rotated so they do not overlap the peripheral edge 54 of the support, and the support is removed from the recess 46. The transparent cover 82, the picture 12, and the picture mat 80 may then be removed from the recess 46 to replace the picture and/or replace the frame 24 with another frame from the group of frames.

As described above, the group of frames 24 includes a plurality of frames each having differing characteristics, including but not limited to, differing shapes, sizes, textures, colors, materials and/or ornamental designs. For example, a frame 24 in the group of frames may be generally rectangular as shown in Fig. 7, a frame in the group of frames may have an ornamental shape as shown in Fig. 9, and a frame in the group of frames may by generally oval-shaped as shown in Fig. 11. Additionally, a frame 24 in the group of frames may include a beveled forward surface 30 as shown in Fig. 7, or may alternatively include a generally flat forward surface 30 as shown in Fig. 11. Although the group of frames 24 are illustrated and described herein in the exemplary manner, it should be understood that the group of frames may include varying characteristics other than those illustrated herein. For example, as described above, the group of frames may include frames of varying shapes, sizes, colors, textures, materials, and/or ornamental designs, in addition to other characteristics not explicitly described herein. Because the frames 24 are interchangeable with the universal support 20, rather than stock an audio recorder and player device 22 for each frame 24 in each style of frame stocked in an inventory of a manufacturer or seller, the manufacturer or seller need only stock a number of audio recorder and player devices corresponding to a number of picture frame assemblies that the manufacturer/seller anticipates selling.

The above-described picture frame assembly is cost-effective and reliable for displaying a picture and for recording, storing, and playing back sounds associated with the picture. More specifically, each frame in a group of frames having differing characteristics is interchangeable with other frames in the group for use with a universal support having an audio recorder and player device mounted thereon. Because the audio recorder and player device is mounted on

the universal support rather than the frame, a manufacturer or seller of the picture frame assembly need only stock a number of audio recorder and player devices corresponding to a number of picture frame assemblies that the manufacturer/seller anticipates selling. Additionally, a user can change the appearance of the assembly by selecting from the group of frames a frame having a desired set of characteristics for display of the picture without replacing the audio recorder and player device.

When introducing elements of the present invention or the preferred embodiment(s) thereof, the articles "a", "an", "the" and "said" are intended to mean that there are one or more of the elements. The terms "comprising", "including" and "having" are intended to be inclusive and mean that there may be additional elements other than the listed elements.

As various changes could be made in the above constructions without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.